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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

09/14/2009

Patrick G. Burns
Greer, Burns & Crain, Ltd.
Suite 2500
300 South Wacker Drive
Chicago, IL 60606

EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1791

DATE MAILED: 09/14/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,552	02/27/2006	Yoshimasa Hashimoto	OGW0423	7758

TITLE OF INVENTION: PNEUMATIC TIRE WITH TREAD INCLUDING SIPES HAVING BENT PORTIONS FORMED WITH ZIGZAG SHAPE WITH AMPLITUDE IN RADIAL DIRECTION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	12/14/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

7590

09/14/2009

Patrick G. Burns
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 300 South Wacker Drive
 Chicago, IL 60606

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yoshimasa Hashimoto

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APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	12/14/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
MAKL STEVEN D	1791	I52-209150

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 321 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 321 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/569,552

Examiner

Steven D. Maki

Applicant(s)

HASHIMOTO ET AL.

Art Unit

1791

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8-13-09.
2. ☒ The allowed claim(s) is/are 3-5, 10 and 11.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Examiner's Amendment

1) An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Change title to:

--Pneumatic tire with tread including sipes having bent portions formed with zigzag shape with amplitude in radial direction--

See MPEP 606.01.

Reasons for Allowance

2) The following is an examiner's statement of reasons for allowance, which supplements applicant's arguments filed 8-13-09 in which applicant for first time argues that Lagnier 965's sipe comprises "... bending lines having zero amplitude in a tire radial direction ..." (page 2) and uses Invention Example 1 as a comparison example substantially corresponding to Beckmann et al in order to show significantly improved failure incidence and generally equivalent or better on-ice braking performance (pages 4-5):

Beckmann et al (US 5,250,001) discloses a **three dimensionally shaped incision (sipe)** formed by a three dimensionally shaped metal sheet. In the embodiment of Figures 3a and 3b, the metal sheet (and consequently the sipe formed during use thereof) is defined by zigzag bending lines 3" and zigzag bending lines 4". Figure 3b illustrates three bending lines 3" extending (from "left" to "right") across the

entire longitudinal length of the metal sheet. When the metal sheet is used to form a transversely oriented sipe in a block, the resulting sipe comprises bent portions ranging in the tire widthwise direction while bent in the tire circumferential direction and being formed inside the block in three positions wherein

- the **"upper" bending line 3" forms a concave bent portion,**
- the **"middle" bending line 3" forms a convex bent portion, and**
- the **"lower" bending line 3" forms a concave bent portion.**

In addition to being bent in the tire circumferential direction, each of these three bent portions is formed with a zigzag shape with an amplitude A" in the tire radial direction. The zigzag trace (extending from "left" to "right") of bending lines 3" can be seen in both Figure 3a and Figure 3b. The amplitude A" in the tire radial direction of zigzag bending line 3" (corresponding to applicant's amplitude T such as amplitude A, B, C or D in applicant's Figure 6) - and consequently of the bent portions - ranges from $C''/2$ to $3C''$. Distance C" (amount of displacement of zigzag bending lines 3") is indicated in Figure 3a. Although amplitude A" for zigzag bending lines 3" is not indicated in Figure 3a, amplitude A for sinusoidal bending lines 3 is indicated in Figure 1a (a related embodiment in which sinusoidal bending lines 3 are used instead of zigzag bending lines 3"). The transversely oriented three dimensionally shaped sipe formed by the metal sheet of Figure 3b comprises a zigzag shape with an amplitude in the tire circumferential direction being formed on a tread surface. This amplitude in the tire circumferential direction of the zigzag shape on the tread surface (corresponding to applicant's amplitude "X" in applicant's Figure 7) is constant and is equal to embossing

depth p (Figure 3b). Beckmann et al fails to disclose "a tilt angle of the sipe in the tire circumferential direction to a normal-line direction of the tread surface is set smaller at a portion closer to the bottom of the sipe than that in a portion closer to the tread surface, and the amplitude of the bent portions in the tire radial direction is set larger at a portion closer to the bottom of the sipe than that in a portion closer to the tread surface".

Lagnier 965 (US 4,794,965) discloses that it is known per se in the tire tread art to form an incision (sipe) such that (1) amplitude (a) in the tire circumferential direction is constant and (2) a tilt angle (θ) of the sipe in the tire circumferential direction to a normal-line direction of the tread surface is set smaller at a portion closer to the bottom of the sipe than that in a portion closer to the tread surface. See Figure 3C. However, the bent portions in Lagnier 965 have an amplitude in the tire radial direction of zero because each of the five bent portions in Figure 3C fail to have a zigzag shape. In Lagnier 965, a zigzag shape with an amplitude in the tire radial direction is not formed in each of the bent portions. Hence, Lagnier 965 teaches bent portions having an amplitude in the tire radial direction of zero instead of "the amplitude of the bent portions in the tire radial direction is set larger at a portion closer to the bottom of the sipe than that in a portion closer to the tread surface".

Lagnier 002 (US 5,783,002) discloses an incision (sipe) defined by an undulating trace having wavelength λA and amplitude αA and an undulating trace having wavelength λB and amplitude αB . However, the amplitudes αA and αB are in the tire circumferential direction instead of the tire radial direction. In other words, each bent portion of Lagnier 002's sipe has an amplitude in the tire radial direction of zero. This

conclusion can best be appreciated by recognizing that a side view of Lagnier 002's sipe demonstrates rectangles defined by straight vertical lines and straight horizontal lines whereas applicant's Figure 6 side view of the sipe demonstrates quadrilaterals having two parallel sides and two non-parallel sides. In other words, Lagnier 002's sipe comprises "bent portions ranging in the tire widthwise direction while bent in the tire circumferential direction are formed inside the block at at least two positions in the tire radial direction" but *each bent portion* is not formed with a "a zigzag shape in the tire radial direction". Thus, Lagnier '002's teaching to vary wavelength λ_B in the tire radial direction or amplitude α_B in the tire circumferential direction is not instructive as to varying the amplitude C in the tire radial direction of bending lines 3".

When considered as a whole and in light of examples 2-8 in the specification, the prior art including Beckmann et al, Lagnier 965 and Lagnier 002 whether taken singly or in combination fails to render obvious configuring a sipe such that "the amplitude of the bent portions in the tire radial direction is set larger at a portion closer to the bottom of the sipe than that in a portion closer to the tread surface" (emphasis added) **in combination with** the remaining limitations of claim 3.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

Art Unit: 1791

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
September 10, 2009